

REMARKS/ARGUMENTS

This amendment is submitted in response to the Office Action dated April 7, 2005. Claims 1-18 are currently pending in the present application. Claims 1 and 10-18 have been amended. Claims 11-18 have been amended to correct errors in the claim dependencies. The skilled person would have recognised this as an obvious error due to the absence of antecedent bases and, in the case of claims 11 and 15, references to claims with the wrong designations of subject-matter.

Claims 14-18 have been amended to direct these claims to patentable subject matter.

Claims 1, 10 and 14 have been amended by adding the phrase "maintained as a variable in the multi-user computer system". Basis for this amendment can be found on page 5, lines 2-3, of the specification as originally filed. Claims 1 and 14 have been amended, on the basis of claim 10, by adding the phrase "at a terminal".

Title of the Invention

The Examiner objected to the title of the invention as being neither descriptive nor precise. The applicant has amended the title to read, "A Multi-User Computer System With an Access Balancing Feature" in order to refer to provide a more precise title. Favorable consideration and withdrawal of the objection in view of this amendment, is requested.

Abstract

The abstract has been objected to as being more than one paragraph and because it employed "means" terminology. The abstract has been amended by cancelling the second paragraph thereby obviating the objection to more than one paragraph and removing all means language. Favorable consideration and withdrawal of the objection is requested.

Drawings

The drawings have been objected to under 37 C.F.R. §1.83(a) on the basis that they fail to show a computer program comprising one or more routines. Fig. 1 has been amended to show a computer program 4b comprising one or more routines. Basis for this amendment is found on page 4, line 4 of the specification as originally filed. The specification has also been amended at

page 4, line 4, to insert the reference numeral 4b used in amended Fig. 1. Favorable consideration and withdrawal of the objection to the drawings in view of these amendments is requested.

Rejections Under 35 U.S.C. §112

Claims 1-18 have been rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. This rejection, at least insofar as it applies to claims 1-18, as amended, is respectfully traversed and reconsideration is requested for the reasons which follow.

It is submitted that the amended claims are sufficiently clear for the skilled person to be able to determine the scope of their subject-matter. The amendment specifies that the maximum number is a variable maintained in the multi-user system, as opposed to an inherent constraint of the computer system. Thus, the term "maximum number" is sufficiently clear, since the skilled person would recognise that it is the value of the variable.

The log-on request is equally clear, because the claim specifies that the log-on request is entered by a user. As to where the log-on request is, the independent claims, as amended, specify that it is entered by a user at a terminal. As to what the log-on request is, it is submitted that the claim is sufficiently clear since the skilled person is aware that a log-on request is a request to initiate a user session. For these reasons, the applicant requests that the rejections under 35 U.S.C. §112 be withdrawn.

Rejection Under 35 U.S.C. §101

Claims 14, 16 and 17 have been rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter. Claims 14, 16 and 17 have been amended to claim statutory subject matter. Favorable consideration and withdrawal of the rejection in view of the amendments to these claims is requested.

Rejection Under 35 U.S.C. §103(a)

Claims 1-19 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent no. 6,757,679 (hereinafter "Fritz"). This rejection is respectfully traversed and reconsideration is requested for the reasons which follow.

Fritz describes an electronic queue management system for implementation on a chip (see abstract). As described in column 2, lines 31-39 of Fritz, the queue management system includes a plurality of primitive queue elements each consisting of a register for a next-pointer and a register for a queue number. The next-pointer values of the queue elements are available to each queue element as an input via a multiplexer and through a register. Such queue elements are associated with an entry in a central array in which the data belonging to the actual requests are stored. In the hardware implementation, the queues consist of m so-called, "queue-base units" representing the m top of queues, and n so-called queue-elements representing the n requests (column 2, lines 44-46). No central logic is required for managing the queue situation (column 5, lines 1-2). Therefore, Fritz relates to an implementation of a queue on a chip, with no mention of log-on requests and thus is not directed to the processing of multiple log-on requests in the context of a multi-user computer system.

The effect provided by the present invention compared to the prior art is to provide a user-friendly way of tailoring the capacity of a multi-user computer system to average user requirements, thereby making more efficient use of the available computer system resources. This effect is achieved because the initiation of the user session is halted, so that the log-on request need not be entered again. This provides the user-friendly aspect of the invention. Because the method acts to limit the number of log-on requests that are being processed simultaneously, the method acts to reduce the peak processing requirements, moving them closer to the average requirements.

The skilled person seeking to attain such an effect would not turn to Fritz, because Fritz is not in the relevant technical field. In particular, Fritz does not relate to a multi-user computer system, but to a hardware implementation of queue in an integrated circuit (see claim 6 of Fritz, for example). There are no user sessions. The "requestors" are not users entering log-on requests at a terminal. Even were the skilled person to attempt to apply the teachings of Fritz, he would not arrive at a method or object falling within the scope of claims 1 and 10 respectively. Fritz does not teach the processing of a log-on request entered by a user at a terminal. The "requesters" mentioned in Fritz are not specified in further detail. Fritz does not teach that the creation of a user session is halted when more than a maximum number, maintained as a variable in the multi-user computer system, of log-on requests are being processed simultaneously. Fritz does not even teach an analogy, since the processing of the requests disclosed therein is not even halted.

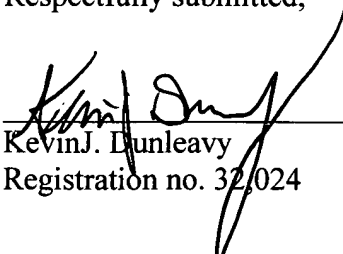
Instead, the maximum number of requests per user is limited (column 2, lines 24-26). Furthermore, Fritz does not disclose that pending requests are processed simultaneously. Instead, queues are executed in parallel, with no central logic being required for managing the queue situation (column 5, lines 1-3). Each of the requests is associated with one of m targets, i.e. resources 120 (column 4, lines 31-32). The option of multiple removes in one cycle is provided (column 3, lines 66 – column 4, line 3), without any limit to the number of multiple removes being disclosed.

The present invention provides an effect not achievable even by analogous application of the queue system disclosed in Fritz in a multi-user computer system. This effect is also novel compared with conventional methods for controlling the creation of user sessions on a multi-user computer system. This consideration supports the conclusion that the subject-matter of the independent claims 1, 10 and 14 of the present application is not obvious having regard to the prior art.

Accordingly, favorable consideration and withdrawal of the rejection under 35 U.S.C. §103(a) over Fritz is requested.

Reconsideration and allowance is respectfully requested in view of the amendments made and the remarks made above.

Respectfully submitted,



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MARKED-UP VERSION

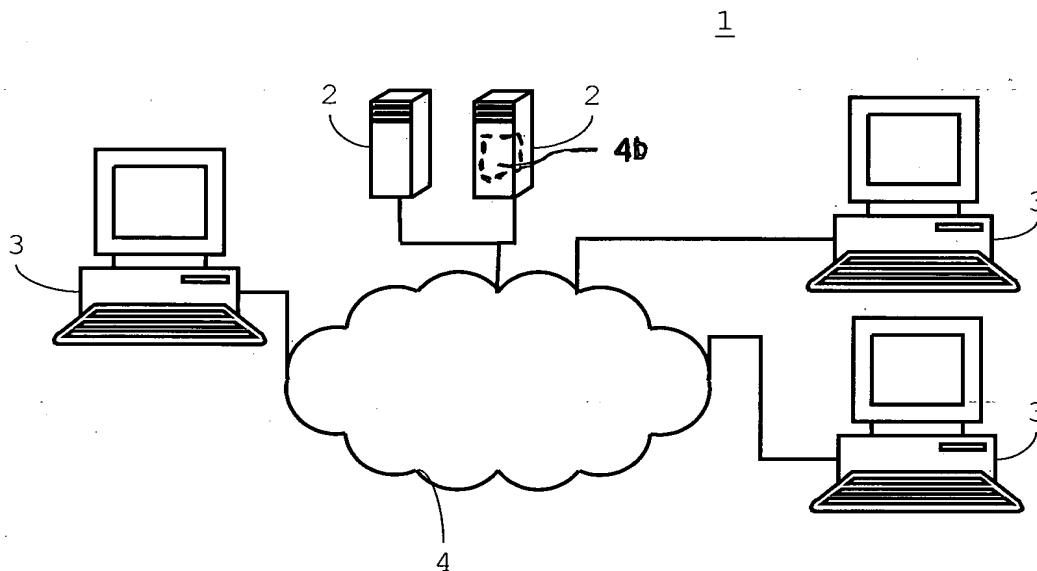


Fig. 1

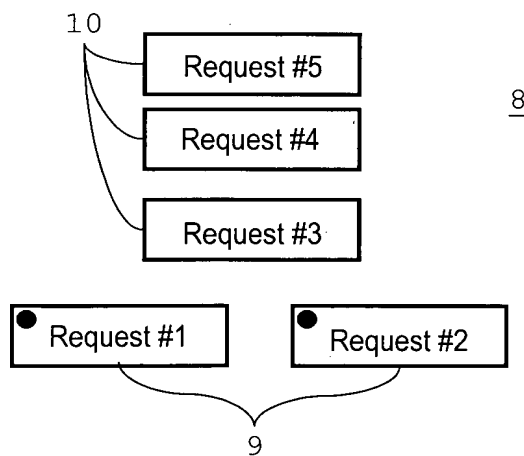


Fig. 2